IV. RATE DESIGN

A. The Company has Designed Rates in a Manner that is Consistent with Department Precedent and Has Presented a Reasonable and Appropriate Basis for Allocating Costs Among Customer Classes

The Company has followed appropriate and well-accepted procedures in terms of designing its base rates. First, the Company presented an accounting cost of service study ("COSS") that is consistent with Department requirements for such studies. The COSS is generally consistent with prior analyses performed by the Company, but also addresses more recent Department precedent, including precedent associated with the "unbundling" of the natural gas market. See, e.g. Berkshire Gas, D.P.U. 92-210 at 201 et seq. ; Boston Gas, D.P.U. 96-50 (Phase I); pp. 133-138; NOI – Natural Gas Unbundling, D.T.E. 98-32. The Company also developed and relied upon an appropriate marginal cost study performed in a manner that was consistent with Department precedent and sound economic theory. The marginal cost study was applied primarily in establishing tail block rates. Exh. BG-15, p. 27. Finally, the Company's rate design reflected the Department's goals for utility rate structure, namely efficiency, simplicity, continuity, fairness, and earnings stability. Exh. BG-22, p. 25; Fitchburg Gas, D.T.E. 98-51, p. 131; Boston Gas, D.P.U. 96-50 (Phase I), p. 133; Berkshire Gas, D.P.U. 92-210, p. 201; Boston Gas Company, D.P.U. 93-60, pp. 331-332; Massachusetts Electric Company, D.P.U. 92-78, p. 116 (1992). In addition, the Company has made an appropriate proposal for the adoption of therm billing in order to conform to other Massachusetts utilities and facilitate the development of a competitive market for natural gas. Exh. BG-22, p. 27.[95]

[95] The Company explained that revenue requirements should be based upon the expected thermal content of gas to be delivered. DTE-RR-17. The Company explained that the application of an inappropriate thermal content could result in a failure to generate the required revenue requirement even when prudent supplies are provided and delivered. DTE-RR-17. Ms. Zink explained that with the greater mix of Canadian supplies in New England in recent years due to

B. The Company's COSS Accurately and Appropriately Assigns Costs to Rate Classes

The Company's principal rate design witness was Mr. Normand, president and principal of MAC. Mr. Normand was assisted by his colleague, Mr. Harrison, who had primary responsibility for the marginal cost analysis and sponsored testimony on the Market-Based Allocator ("MBA") discussed in greater detail infra. Mr. Normand and Mr. Harrison are well-established experts in the field of rate design and have been responsible for the preparation of numerous rate design analyses that have been accepted by the Department such as the Probability of Dispatch electric supply cost allocation method and the use of the Proportional Responsibility method to allocate electric transmission and gas distribution plant as well as gas supply capacity costs. Berkshire Gas, D.P.U. 86-82; Berkshire Gas, D.P.U. 89-112; Berkshire Gas, D.P.U. 90-121; Berkshire Gas, D.P.U. 92-210; Nantucket Electric Company, D.P.U. 88-168; Fitchburg Gas, D.T.E. 98-51; Fall River Gas Company, D.P.U. 91-61; Fall River Gas Company, D.P.U. 96-60; Bay State, D.P.U. 95-52. Similarly, Mr. Normand and Mr. Harrison have developed a number of enhancements to the rate design process that, in turn, have been accepted by the Department, such as the Probability of Dispatch electric supply cost allocation method and the use of the Proportional Responsibility method to allocate electric transmission and gas distribution plant as well as gas supply capacity costs. Moreover, these experts were further benefited by their substantial familiarity with the Company as MAC has performed the COSS and rate design in Berkshire's six most recent base rate filings. Tr. 16, p. 1861; AG-RR-55.

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the establishment of the Dracut hub, the Company is experiencing a lower overall BTU content in delivered gas. Tr. 6, p. 785. The Company demonstrated that it was therefore appropriate to design rates based upon test year BTU values that reflected the Dracut hub's effect. DTE-RR-17; Tr. 6, p. 787. If a longer period is applied to determine heat content, then a corresponding pro forma adjustment for volumes for rate design must also be applied. Id.

As described above and consistent with the PCM, the Company applied the revenue requirements of the Company on a stand alone or pre-merger basis in determining its cast off rates for the COSS. Exh. BG-22, p. 24. The use of such cast off rates is consistent with the rationale for the PCM, as described by Dr. Gordon and Ms. Zink and discussed in Section II.B.1, supra.[96] The Company next applied the Department's well-established five-step process in allocating costs. See Berkshire Gas, D.P.U. 92-210, pp. 201-202; Boston Gas, D.P.U. 96-50, pp. 133-134; Fitchburg, D.T.E. 98-51, pp. 131-132.

Mr. Normand explained that he first "functionalized" costs, namely he identified those costs specifically associated with the production, storage or transmission and distribution functions of providing service. His second task was to "classify" the expenses in each functional category based upon the factors underlying their causation. Third, the most appropriate direct assignment or allocator was identified or developed for each classified and functionalized cost. Exh. BG-15, pp. 11-17. The fourth task was then to allocate the Company's remaining costs to each rate class using internally developed allocators, built from the costs already allocated to class, function and classification. The fifth and final step was the analysis of the results of the COSS in terms of analyzing the revenues produced by each rate class. This analysis facilitated the determination of whether equalized rates of return may be established in the new rate design or whether, alternatively, rate design adjustments must be made based upon continuity concerns. See e.g. Boston Gas, D.P.U. 96-50 (Phase I), pp. 133-134.

Mr. Normand explained that the COSS model he developed for Berkshire was based upon the application of a Company-specific model that reflected the Company's actual

[96] As described in Exh. BG-23, Exhibit KLZ-1, p. 4, the PCM contemplates opportunities for some further refinement to rate design in the course of the annual filings that shall occur subsequent to the 31-month rate freeze. Exh. BG-22; pp. 24-25; Exh. BG-15, p. 9.

operations and experience. Exh. BG-15, p. 9. Mr. Normand's COSS began with rate base and then continued with revenues, operating expenses, taxes and the computation of a labor allocator. Id., at p. 10. For ease of review, the model presents a summary of the costs to serve (Exh. BG-16, Sched. PMN-3, PMN-4), a list of the allocation factors (Exh. BG-17, Sched. PMN-8, pp. 26-34) and a summary of the revenue requirements based upon established cast off rates.

In terms of plant, the starting point for Mr. Normand's analysis, Mr. Normand sought to determine the intended use of specific plant investments as well as their actual use during the test year. Exh. BG-15, p. 11. Specifically, Mr. Normand considered the Company's supply planning and dispatch procedures. In terms of production capacity, Mr. Normand employed a simplified version of the MBA method that MAC has presented to the Department on numerous occasions and that is virtually identical to that approved by the Department in its last fully adjudicated base rate case proceeding. Fitchburg Gas, D.T.E. 98-51, pp. 151-154. This model was explained in greater detail by Mr. Harrison and is discussed at Section IV.E, infra. Distribution plant was allocated based upon the Proportional Responsibility ("PR") Method "whereby normalized monthly system loads carried by the distribution system are weighted so that costs are assigned monthly based on the variation of sales from peak to off-peak months." Exh. BG-15, p. 13. MAC was able to assign most customer-related plant directly "to customer classes in accordance with the Company's books." Id. Berkshire, unlike most utilities, maintains more refined service property records (Id.) and, thus, this direct assignment was possible.

In sum, the functionalization and classification of plant costs by Mr. Normand was fully and clearly articulated, was conducted in a manner that is consistent with Department precedent and is reasonable and appropriate. Accordingly, the Department should accept these analyses for purposes of rate design.

Mr. Normand next developed or applied specific allocators for each functionalized and classified group of costs or expenses. The choice of allocators properly assigned costs to customer classes in proportion to the relative contribution of each rate class to the causation of such costs. The allocators are listed in detail in Exhibit B-17, Schedule PMN-8, pp. 26-34. Thus, in accordance with Department precedent, costs associated with transmission and distribution plant that are dependent upon specific customer requirements (i.e., services, meters, meter installations and house regulators) were allocated based upon a customer-related allocator. The expenses related to the operation and maintenance of the Company's transmission and distribution plant employed to deliver gas to the various services (i.e., mains and station equipment), that are designed and constructed primarily to meet customer demands, were appropriately allocated based upon the corresponding plant demand-related allocator. Specifically, the Company employed the PR method, a capacity allocation procedure that appropriately reflects monthly variation in send-out. This allocation procedure has been applied and accepted in the Company's three most recent base rate proceedings. See e.g., Berkshire Gas, D.P.U. 92-210 at 209-210; Berkshire Gas D.P.U. 90-121 at 39-41; Berkshire Gas, D.P.U 89-112. In a similar vein, expenses related to the investment in customer-related plant such as meters and services and billing related costs such as meter reading and billing were allocated to customers using customer-related allocators. Exh. BG-15, p. 13.

Mr. Normand initially performed two separate "COSSes," one "bundled" reflecting the allocation of all costs and one "unbundled" that reflects the transportation charge only. Base rates were designed based upon the "unbundled" COSS.

Mr. Normand explained that some refinement was necessary to appropriately develop "unbundled" rates, including certain adjustments not made at the time the Company's initial

unbundled rates were established in docket D.T.E. 98-65 following the efforts of the Massachusetts Gas Unbundling Collaborative. See, Exh. BG-15, p. 18; Exh. BG-16, Schedule PMN-5. Mr. Normand explained that the majority of the changes necessary to "remove" gas costs were related to "indirect" gas costs. The most significant indirect cost is the capacity costs associated with the ownership and operation of local production facilities. Exh. BG-15, p. 19. In this regard, Mr. Normand analyzed the Company's usage of its new LNG facility in terms of the need to maintain adequate distribution pressure, particularly in the northern portions of the Company's Greenfield distribution system. The Company constructed the plant in order to maintain adequate distribution pressure, on cold or peak days as well as non-peak days. See Section III.C.1.b, supra.[97]

Simply put, the LNG facility is necessary to maintain distribution pressure for both sales and transportation customers as found in the Department's and Siting Board's decision on the need for the facility. Exh. BG-15, p. 20; Berkshire Gas, D.T.E. 99-17/EFSB 99-2. The facility is nevertheless versatile and affords other ancillary benefits to customers, including potential supply benefits. Thus, Mr. Normand calculated that 83% of the cost for the LNG plant is required for pressure support based upon a Company-specific analysis. Exh. BG-15, p. 20; exh. BG-18, pp. 136-141. The remainder of the LNG plant's costs were assigned to the gas supply function. Accordingly, for all the reasons articulated in Section III.C.1.b, supra and for the reasons relied upon by the Department and the Siting Board in approving the construction and

[97] As mentioned, the Company is particularly proud of its long-term efforts to defer the need for the capital investment associated with the plant through a variety a planning techniques including load management, targeted DSM and engineering applications such as the use of a portable LNG vaporizer. Exh. BG-1, p. 11. These efforts secured substantial benefits for customers.

design of the LNG facility, the Department should accept the Company's allocation of LNG facility costs for the distribution pressure support function.

The final step in Mr. Normand's COSS analysis was to develop the actual rates of return for each class and appropriate class revenue targets. Exh. BG-15, p. 22. Referring to the COSS, total operations expense was subtracted from total revenue to determine net income. The allocated rate base for each class was then divided into the corresponding operating income to determine the overall class-specific rates of return. The total company rate of return in the test year was 6.57%, however, class rates of return ranged from (2.53%) for the R-2 class to 13.5% for the G-43 class. Relative rates of return were calculated for each class by dividing each of the class rates of return by the Company's overall rate of return, resulting in index rates varying from (0.363) for the R-1 class to 18.410 for the G-52 class. Exh. BG-16, Schedules PMN-3, 4; Exh. BG-22, p. 30.

Mr. Normand also developed COSS results and base revenue requirements and the percentage of revenue change for each class at the uniform claimed rates of return. The percentage increase for each class was shown in Ms. Zink's testimony. Exh. BG-22, p. 31; Exh. BG-16, Schedule PMN-4.

As the final step in determining the interclass allocations to be used in designing rates, Mr. Normand examined the required class revenue targets in terms of conformance with the Department's precedent and policy on rate continuity. See e.g. Fitchburg Gas, D.T.E. 98-51, p. 132; Berkshire Gas, D.P.U. 89-112 at 10-13; Western Massachusetts Electric Company, D.P.U. 91-290 pp. 44-45 (1992); Commonwealth Electric Company, D.P.U. 89-61 (1989); Exh. BG-15, p. 25. The Company concluded that the maximum increase that any one class should be required to receive should be no greater than 125% of the overall rate increase or 11.2%. Exh. BG-15, p.

25; Exh. BG-22, pp. 29-30. As a final guideline, Mr. Normand also considered the importance of interclass rate of return levels in order to equalize the distribution of subsidies. Exh. BG-15, p. 25. Exh. BG-15, p. 27. Exh. BG-22, p. 30

The Company's COSS has been shown to be a reliable and appropriate determination of the respective costs of serving each customer class and to be fully consistent with established Department precedent. Finally, the Company's proposed revenue targets represent a balanced and appropriate further step in its movement toward ultimately equalizing rates of return while avoiding any undue impact upon any rate class. Indeed, the Attorney General's only criticism with respect to the COSS is with respect to the MBA allocator that is addressed in Section IV.E, infra. For the reasons stated herein, the Department should accept the Company's COSS methodology.

C. The Company's Marginal Cost Study Presents the Most Accurate Estimation of Marginal Costs

Having established rate class revenue requirements in its COSS, the Company then performed a marginal cost study ("MCS") and employed the output of this analysis in terms of the design of its proposed rates. Mr. Harrison performed the MCS. A flow chart of the MCS is presented at Exhibit BG-15, p. 20. The MCS was performed in a manner substantially similar to that approved in D.T.E. 98-51. Exh. BG-19, p. 32 (Mr. Harrison explained that he added enhancements with respect to two minor items.).

Mr. Harrison explained that the MCS provides "an estimate of the cost of providing an additional unit of service." Exh. BG-19, p. 16. These estimates are then incorporated into the rate design process to the extent permitted by considerations of rate continuity and intraclass equity. Id. The use of marginal cost analysis in rate design is also intended to provide more

appropriate or efficient consumption decisions. The Department has defined the goals of the MCS:

> The marginal commodity cost component is intended to reflect the cost of varying the Company's level of the gas sendout by one unit, assuming the Company's production capacity is held constant. The marginal production capacity cost component is intended to reflect the long-run cost of expanding the Company's production capacity; since gas production capacity is made available in relatively large increments, it is necessary to translate the cost of a large increment of capacity into a meaningful unit rate. The marginal T&D cost component is intended to reflect the unitized cost, based on historical data and recent trends, of expanding the local distribution network to accommodate growth in customers' requirements.

Boston Gas, D.P.U. 88-67, at 258; Exh. BG-19, p. 16.

Mr. Harrison developed marginal costs in three categories: customer, commodity and capacity (or demand) charges. Exh. BG-19, pp. 17, 20. Mr. Harrison analyzed marginal costs for each category for the appropriate time period. Three different time periods were applied in the MCS: the design day; the six-month "winter" period; and the six-month "summer" period. Exh. BG-19, p. 17. The design day was applied to measure capacity costs and represent the load on the coldest day for which the Company plans to provide reliable service. Id. The summer and winter seasons represent periods when sendout is moderate or more secure.

In terms of capacity costs, Mr. Harrison utilized the modified peaker method that is familiar to the Department. Mr. Harrison recognized that the new LNG facility long-run marginal capacity costs are calculated by discounting the costs of pure capacity when current capability exceeds current requirements. Exh. BG-19, pp. 21-22. New peaker cost estimates were developed for 2002 in light of the fact that the Company's supply portfolio includes contracts that expire in such year. Id.

In terms of marginal distribution capacity costs, Mr. Harrison applied three separate methodologies. Exh. BG-19, pp. 22-23. Mr. Harrison concluded that the Main Extension and System Reinforcement approach provided the best estimates as it is based upon the same engineering principles that control planning decisions and is based upon Company-specific information. Id. at 23-24.

Mr. Harrison developed marginal commodity costs utilizing a dispatch model to simulate sendout in the rate year and then ran a second dispatch assuming a 1% load increment. Exh. BG-19, pp. 25-26. Monthly marginal costs were developed and then load weighted for each rate class to develop winter and summer marginal commodity costs. Id. at 26. Schedule JLH-4, Table 10 of his MCS summarizes marginal commodity costs. Exh. BG-20, Sched. JLH-4, p. 40. Exh. BG-21, pp. 43-47.

Mr. Harrison next developed marginal customer costs by computing customer-related plant, operations, maintenance and billing costs. Exh. BG-19, p. 27. Schedule JLH-4, Table 11 presents the development of marginal customer-related costs by class.

Schedule JLH-4, Table 13 presents unit marginal costs based on billed sales in the winter and summer months. Id. at 33. Berkshire is pleased to note that no party has challenged the Company's marginal cost study or methodology. Accordingly, the Department should accept the Company's marginal cost study for purposes of rate design.

D. Development of Rates

Mr. Normand described the three main steps of the Company's rate design analysis.

> First, I determined the total costs incurred to serve each customer class for cost allocation and rate design purposes. Next, I examined the accounting cost of service study and compared these results to the revenues currently produced by each rate class to determine appropriate class revenue targets for the rate design. Finally, I performed the rate design itself utilizing these revenue

> targets, marginal cost study results and present rate design information in order to develop a practical and reasonable rate design recommendation that furthered the Department's established rate design principles.

Exh. BG-15, p. 22. The multi-step calculation of revenue targets is shown on Schedule PMN-6. Exh. BG-16.

Mr. Normand began with the fully-allocated COSS based upon uniform rates of return. Exh. BG-15, p. 24. Mr. Normand next identified the percentage increase that would be required to eliminate subsidies. Next, the allowable increase to any class was capped at 125% of the overall rate increase and Mr. Normand also took steps to ensure that no class received a rate decrease. Further analysis resulted in a constraint that no class receive less than a five percent increase. The revenue deficiencies resulting from these caps were then allocated to uncapped classes. Id. Low income or discount rates were then computed based upon a straight application of discount factors. Exh. BG-15, p. 24; see also Exh. BG-22, pp. 36-37. The low-income subsidy was then assigned to remaining classes, excluding any capped classes. Exh. BG-15, pp. 24-25.

Mr. Normand relied upon these analyses to establish customer charges and then proposed blocking. Customer charges were based upon the COSS and MCS, as subject to continuity constraints particularly for low income use customers.[98] Tr. 15, p. 1654. Exh. BG-15, p. 27. Rate blocks established pursuant to the Department's long-standing principle that rate blocks should be established to ensure that "at least half of all customers [will] be billed in the tail

[98] Mr. Normand's rate design eliminated seasonal rates for smaller rate classes including R-1, R-2, R-3, R-4, G-41 and G-51. Mr. Normand explained that both the COSS and MCS cost studies indicate that the customers costs are a substantial portion of these class's revenue requirements. Cost based rates would suggest extremely large and impractical increases to the customer charges for these classes. These customer costs are not seasonal in nature. If the revenue requirements associated with these costs are recovered equally in each season and then converted to a per therm rate using seasonal sales, the differentials between seasons would be seriously diluted. Tr. 15, p. 1652-1662.

block, excluding zero-use bills." Exh. BG-15, p. 27; Exh. BG-37, p. 43; Exh. BG-24, Schedule KLZ-8; Tr. 16, p. 1666; see also Commonwealth Gas, D.P.U. 87-122 at 205. Marginal cost results were used as a guide to set tail block prices and then such prices were evaluated for continuity. The specific calculation and charge summaries are presented in Ms. Zink's testimony. Exh. BG-22; pp. 37-43.

The Attorney General offered only limited comments on the Company's rate design. The Attorney General first agrees with the Company that the Department should analyze and consider bill impacts in developing final rates. AG In. Br., p. 65. The Attorney General presumes, however, that, despite an extensive evidentiary record and the fact that the Company's rate design does not reflect any significant departure from well-established Department precedent, an extended review of the compliance rate filing will be required. The Company, however, believes that it is premature to consider the need for a technical session to review the compliance filing. The Company also notes the need for the prompt implementation of compliance rates upon the issuance of a final decision.

The Attorney General next raises two specific concerns with the Company's rate design. The first relates to an adjustment with respect to LBR. The Attorney General notes that the Company made this correction on the record, but suggests that the Company somehow sought a "back door" adjustment. AG In. Br., p. 66. In fact, the Company eventually presented substantial reconciliation analyses with respect to the LBR correction. The Company has throughout this proceeding sought to develop a full, accurate and documented record to facilitate the Department's review.

The second adjustment relates to the determination of appropriate levels of customers taking service pursuant to low income or discount rates. The Attorney General recommends that

rates be designed based upon assumed low income rate participation levels substantially below current levels thereby artificially decreasing revenues properly collectable by the Company. The Company submits that such a derived result should not be accepted. AG. In. Br., p. 66. In contrast to the Attorney General's unsupported assertions, Ms. Zink explained that the Company was experiencing a substantial increase in participation levels in low income rates due to economic conditions in its service territory and the lingering effects of the gas commodity price spike experienced last winter. Exh. BG-27, p. 36. As Ms. Zink testified and LEAN confirmed, Berkshire has been active in promoting its low income rates and working with LEAN groups to enroll customers in such programs. Id.; LEAN In. Br., p. 1. Berkshire proposed that current rates of participation in discount rates be used for rate design. Exh. BG-22, p. 36. An analysis of DTE-RR-50 confirms the appropriateness of this analysis. Comparing 2001 participation to the test year finds a consistent and increasing trend toward higher participation. For example, participation increased by 14% in September 2001 as compared to September 2000 (3,007/2,643). Similarly, August 2001 saw an 18% increase from the same month in 2000 (3,121/2,748). This trend continues through the year.

The Attorney General misconstrues the recent Fitchburg Gas decision in concluding that the growth in numbers of low income customers is part of the normal "ebb and flow" of customers. AG In. Br., p. 66. In fact, the basis for Berkshire's adjustment is far different than Fitchburg's. In the latter, Fitchburg argued to reduce test year sales for a large customer that left the system after the test year. In the case of Berkshire, the adjustment is proposed for customers who were taking service in the test year under regular residential rates, but who migrated to low-income rates and will continue to take service from the Company. The same level of service provided by Berkshire in the test year will continue to be provided to these migrating customers,

albeit at a lower rate. As the Department stated, "The Department seeks to include in rates the likely cost of providing the same level of service as was provided in the test year." Fitchburg Gas 99-118 at 16. Berkshire is not seeking to reduce test year billing determinants in total, but rather is requesting simply that the test year sales for these migrating customers be reflected in their proper rate class. The migration is a known and measurable change increasing the low income billing units and decreasing regular residential customer sales by an equal amount. To deny this adjustment would cause the resulting rates to generate less than the Company's allowed revenue requirements. The basis for the Company's proposal is that there is not "ebb and flow" with respect to customer participation in low income residential rates, rather a consistent migration and a sustained increase in low income participation rates, which, if left unadjusted, would deny the Company an unbiased opportunity to earn its allowed return.

The Attorney General argues that if this adjustment is allowed, it must also increase the Company's test year revenues to account for the number of new customers added since the end of the test year. AG In. Br., p. 66. This is simply another request for an annualization adjustment. Again he fails to distinguish between migration between classes and ebb and flow. The Attorney General requested a similar annualization adjustment in Fitchburg. The Department found that such an adjustment "would require a number of corresponding adjustments to expenses, and could disrupt the relation of test year revenues to test year expenses" Fitchburg Gas 99-118 at 22. The same is not true for Berkshire's low income billing unit adjustment, since the level of service to the residential classes is the same in total and no adjustment to costs is indicated. Also, the Company notes that the Attorney General's remarks with respect to decreases in customer numbers are more typically the result of customers being

terminated rather than experiencing different economic conditions that would permit service pursuant to conventional rates.

In sum, the Company's low-income rate design proposal is valid and appropriate and avoids any disincentive to the continuing support and active administration of low income rates.

E. The Company is Committed to Diligent Service for its Low-Income Customers.

The Company would like to take this opportunity to respond briefly to LEAN's initial brief. At the outset, Berkshire would emphasize that it has a constructive working relationship with LEAN and greatly respects the efforts made by LEAN on behalf of low-income customers throughout the Commonwealth. Indeed, in its most recent DSM Settlement, D.T.E. 01-29, the Company expressly committed to providing funding to LEAN to assist in these efforts. Exh. BG-2, Attachment A at 3. Additionally, the Company greatly appreciates LEAN'S statement that "Berkshire has been a leader in helping its low-income customers with both a discount rate and the Commonwealth's longest-running low-income utility efficiency program." LEAN In. Br., p. 1. While the Company may not agree with all of LEAN's gas purchasing recommendations, Berkshire shares LEAN's concerns with price votality, and as Ms. Zink testified, has undertaken several pro-active steps in this case, as well as other areas, to address these concerns. Tr. 3, pp. 278-280. In particular, the Company has entered the BP Alliance (discussed in section II.A.2 supra) and the related portfolio optimization agreement, in order to avail itself of the lowest gas prices possible and the economies of scale created through the Energy East merger. In order to provide greater rate stability, the Company has also proposed, in this case, a ten-year price cap (including an initial 31-month rate freeze), an annual 1% consumer dividend, rigorous service quality standards, annual (as opposed to seasonal) rates for residential customers and aggressive, collaboratively developed DSM programs. Tr. 3, pp. 278-280. The Company also offers payment

plans and highly coordinated efforts with local low-income advocacy agencies. Id. Indeed, in order to enhance service to low-income customers, the Company actually provides these low-income agencies with special access to portions of its database in order to ensure that customers eligible for special programs (e.g., fuel assistance) receive such benefits as quickly as possible. Tr. 3, pp. 278-279. In fact, these coordinated efforts may well be responsible for the Company's increased low-income rate participation levels. The Company is committed to continuing its work with LEAN and other interested parties to ensure that it provides the best possible services to its valued low-income customers.

F. The Company's Proposed Use of the MBA Allocator Will Yield a More Equitable Rate Design

The Company proposes to apply the Market Based Allocator ("MBA") developed and supported by Mr. Harrison in order to allocate gas production costs and, in future filings, to develop load factor-based CGA tariffs. Exh. BG-19, pp. 4, 15; Exh. BG-25, p. 8. Mr. Harrison explained that the MBA is a "logical and consistent method to assign production fixed and variable costs to customer classes." Exh. BG-19, p. 4. Mr. Harrison also explained the fact that this method has been presented to the Department on four previous occasions and is being implemented in either its original or "simplified" form by three other Massachusetts gas companies. Id. at 5-6; AG In. Br., pp. 52-53; Fitchburg Gas, D.T.E. 98-51 (approving "simplified" MBA proposed in this proceeding); Bay State Gas Company, D.P.U. 95-52 (1995); Essex Gas Company, D.P.U. 96-70 (1996) (MBA presented in initial testimony); Fall River Gas Company, D.P.U. 96-60 (1996) (MBA presented in initial testimony). Thus, with this filing, the Department has now considered the MBA for fully half of the Massachusetts gas companies. The Company understands that the remaining gas companies in the Commonwealth instituted CGA

clauses pursuant to settlements effected with the Massachusetts Gas Unbundling Collaborative (MGUC).

Mr. Harrison explained that the MBA is a substantial enhancement over the PR allocator often used in the past for the allocation of production capacity. Exh. BG-19, p. 6. The primary factor driving the need for an enhancement to allocation methodologies is the ongoing unbundling of gas rates and the promotion of more competitive markets for natural gas. Exh. BG-19, p. 7. Mr. Harrison explained that marketers now are competing to make gas sales to customers and that this trend will continue during the term of the PCM. Marketers have and will continue to reflect a particular customer's load shape in establishing pricing. Currently, however, the Company's "winter and summer CGA gas prices assign one price to all consumption in a season." Id. No recognition of load factor or cost causation is reflected and, therefore, accurate price signals are not established.

Mr. Harrison explained the consequence of this pricing structure. Mr. Harrison demonstrated that marketers will "cherry pick" the most attractive customers, offering more attractive rates to the customers with the lowest cost to serve. Id. Given the fact that the CGA is a cost pass through mechanism, the Company would still recover its reconciled gas costs. However, remaining customers on the Company's system would eventually pay substantially higher costs. The end result is that captive customers will eventually be forced to bear higher and higher costs. In fact, Mr. Harrison provided a telling example of the consequences of "cherry picking." Exh. BG-19, pp. 8-9; Exh. BG-20, Schedule JLH-2. Mr. Chernick admitted that this practice has a detrimental impact upon remaining sales customers. Tr. 17, pp. 1918-1920. This same concern with probable "cherry picking" of customers was acknowledged by the

Department in accepting the same "simplified" MBA in the Fitchburg Gas decision. Fitchburg Gas, D.T.E. 98-51 at 153.

Mr. Harrison explained that the MBA:

> [I]s a step in the right direction. It provides a more accurate segregation of costs between seasons and among classes… [and] is a marked improvement over the current practice of setting one winter and one summer price applicable to all customers irrespective of their load characteristics.

Exh. BG-19, p. 9.

The simplified MBA requires the application of relatively straightforward calculations, the segregation of the utility's load into "base use" and "remaining load" and the segregation of the resource portfolio to serve these loads. Mr. Harrison noted that he relied upon specific analyses of the Company's resources and dispatch in this process. "Base load" is simply the lower portion of the load duration curve that can be served at extremely high annual load factors. This portion of the load duration curve is served primarily by pipeline supplies. Id. at 10. "Remaining load" reflects not only pipeline but also storage and other resources. Id. at 10-11. The "simplified" MBA uses dispatch results to tabulate costs on a monthly basis; the Bay State MBA performs the same calculation on a daily basis. Id. at 11. A comparison of the two MBA approaches revealed that they provided similar results. DTE-RR-16.

Mr. Harrison presented representative CGA calculations using test year gas cost data while noting that Ms. Boucher would follow the same methodology with respect to future CGA filings. Tr. 15, pp. 1738-1740. Mr. Harrison explained that the simplified MBA presented in this case is essentially the same process that was approved in Fitchburg Gas, reflects a substantial enhancement over the Company's existing methodology and, therefore, should be approved by the Department.

The Attorney General devoted substantial attention to the Company's MBA proposal, both through extensive cross-examination of the Company's witnesses and the presentation of Mr. Chernick's rebuttal testimony.[99] Mr. Chernick's testimony and the Attorney General's arguments are readily dismissed, are inconsistent with Department precedent and policy and will result in the implementation of rates with inappropriate price signals, as described below. In essence, the Attorney General raised yet again his arguments against the MBA allocator that were reviewed, considered and rejected by the Department in the Fitchburg Gas case, D.T.E. 98-51.

An initial and recurring theme in Mr. Chernick's testimony and the Attorney General's argument is that the MBA is "too subjective and complex" and that it is not "well defined" because it can be implemented in different ways. AG In. Br., p. 52; Exh. BG-7, pp. 5, 10-11. As an initial matter, there are different versions of the MBA in use in Massachusetts. See, supra. Here, the simplified MBA in a form substantially identical to that accepted in Fitchburg Gas is being proposed for use by Berkshire. More importantly other parties are able to understand and apply the MBA. Further, the Department has been able to understand and administer the MBA for several companies without any apparent administrative problem. Perhaps most telling is the fact that Mr. Chernick himself has been able to understand the MBA, describe it in great detail and apply it to certain hypothetical scenarios. See Exh. AG-7, pp. 6-9, 14-19, Sched. PLC-5; Tr. 17, p. 1943; BG-RR-4.

[99] The DOER apparently joins in the Attorney General's arguments with respect to the MBA. DOER In. Br., p. 6. Surprisingly, AIM's initial comments argue that the Department should reject the MBA. AIM In. Comments, p. 2. The Company respectfully submits that the Department may wish not to accord substantial weight to AIM's comments due to its limited participation in this proceeding.

Mr. Chernick then seeks to criticize the MBA for its failure to meet an impossible standard that he establishes for the sake of argument. Mr. Chernick testified that there "was no relationship between the Company's proposed allocator and competitive pricing." Exh. AG-7, p. 2; AG In. Br., p. 54. The Company has repeatedly explained that both the MBA and PR methods are cost recovery methods designed to recover neither more nor less than the gas costs incurred by the utility to serve its sales customers' loads. Under competitive pricing, marketers will only participate if they anticipate generating margins in addition to recovering their costs. The Department, however, does not permit utilities to recover margins on top of its gas costs. Neither the MBA nor the PR methods precisely reflect market pricing. The difference between the MBA and PR methods is that the MBA method **more** accurately assigns costs based upon customer load factor and better recognizes the mix of supplies necessary to serve high and low load factor customer groups. Exh. BG-19, p. 9. In short, the MBA allocator more accurately assigns costs based on the causation of such costs consistent with the Department's rate design goals. See Fitchburg Gas, D.T.E. 98-51, p. 153.

Mr. Chernick argues that technical faults with the MBA method make it inappropriate. Exh. AG-7, pp. 16-17. No allocation method could ever satisfy Mr. Chernick's standard and reflect every aspect of design, planning and operation. The Company's position is that the MBA is a more accurate approach and "a step in the right direction." Exh. BG-19, p. 9. The Company has never claimed that the MBA results in a perfect match to market pricing. Cf. Exh. AG-7, p. 3; Exh. BG-19, p. 9. The Company simply claims that the MBA allocator results in a better match to market pricing than the PR allocator.

Mr. Chernick then turns to the notion that customer migration is "not" a problem. AG In. Br., p. 54. The Company has never viewed the unbundling of rates as a problem and, instead,

has firmly embraced competition, including taking many affirmative steps to facilitate marketer activities. Instead, Mr. Harrison and the Company have sought to address potential customer and societal concerns that might develop as a result of inappropriate price signals. Id.[100] Tellingly, the Company's response to an AG record request demonstrated migration was reasonably balanced between high and low load factor customers in Maine where the simplified MBA had been implemented. AG-RR-51. These observed customer migration patterns contradict Mr. Chernick's assertion that the MBA method "underprices" supplies for high load factor customers. Exh. BG 1-6.

In fact, the cross-examination of Mr. Chernick demonstrated that the MBA calculation secures more accurate and appropriate price signals. The Company notes that Mr. Chernick on cross-examination admitted that marginal costs are a "useful guide" in terms of pricing and that you should "try to avoid" setting utility prices **below** short run marginal costs. Tr. 17, 1925-1926. A review of Mr. Chernick's application of the hypothetical originally presented by Mr. Harrison demonstrates the flaws in Mr. Chernick's arguments with respect to the MBA. In Schedule PLC-5 to Mr. Chernick's testimony, a low-load factor customer, "Customer E," would be subject to a price close to the "marketer's price" using the Company's MBA allocator, but **below** short-run marginal costs under the PR, the very price signal that Mr. Chernick says to avoid. Exh. AG-5, Schedule PLC-5; Tr. 17, 1943-1944. Perhaps more informative are the

[100] Under the CGA, only gas costs are recovered and no margin recovery is allowed. Accordingly, the Company's revenues are not increased or decreased by the adoption of the MBA allocator. In fact, if the Company were to "receive" margins from its high load factor customers, then it would necessarily be serving low load factor customers at a "loss." Mr. Chernick would have one customer segment subsidize another, contradicting the Department's basic principle that gas pricing should reflect the underlying cost to serve. See Fitchburg Gas, D.T.E. 98-51, p. 153 ("The Department is persuaded by the Company's arguments that a load factor based GAF represents costs more accurately than a single GAF and, therefore, avoids interclass subsidization.").

results derived in the response to BG-RR-4, where Mr. Harrison's hypothetical was modified to add a small fixed cost to the peaking supply, consistent with the fact that peaking resources typically have some capacity cost component. A comparison of the MBA results to the marketer's cost results show only the slightest differences. The PR results, on the other hand, dramatically understate cost for low load factor customers and continue to price service for the lowest load factor customer **below** marginal commodity cost without making **any** contribution to capacity cost. BG-RR-4.[101]

Mr. Chernick next challenges several appropriate assumptions that support the MBA allocator. Mr. Chernick critiques the use of "more expensive gas" for storage and assigning all planning risk to "remaining load." AG In. Br., p. 57, Exh. AG-7, pp. 4, 15-17, 20.

Mr. Harrison fully addressed those concerns. First, Mr. Harrison explained that the base load portion of the load duration curve is a theoretical separation of the total load curve. Tr. 15, pp. 1731-1732. The base load segment is defined to avoid any planning risk. Moreover, this fact also addresses Mr. Chernick's related concern as to the supposed flaw of applying average daily demand in a month as though it were the same every day. Exh. AG-7, p. 4; AG In. Br. p. 57. Mr. Harrison fully explained that the use of average loads from July and August is a wholly reasonable proxy. Variations in base load in July and August are simply never a problem from a planning perspective. Tr. 15, pp. 1733-1734. Daily loads in excess of the average may be served with relatively inexpensive spot supplies. Mr. Chernick agreed on cross-examination that interstate pipeline capacity was relatively cheap in the summer. Tr. 17, pp. 1926-1928. Further, Mr. Harrison also explained that daily loads less than the average can provide **free** capacity for

[101] Mr. Chernick's response to BG-RR-4 goes to some length to challenge the assumptions for the hypothetical. BG-RR-4. The Company submits that these protests may relate to the fact that the MBA tracks costs in a vastly superior manner to the PR.

storage injections or interruptible sales, both of which reduce the costs to serve the remaining portion of the supply curve. Tr. 15, 1733. Mr. Harrison summarized the lack of merit in Mr. Chernick's claims with respect to planning for demand in the summer.

> I've never heard a system planner say that the integrity of the system was in jeopardy because it couldn't meet the colder days' loads in July or August. It's just not a significant planning event, and really irrelevant to the general calculation.

Tr. 15, p. 1734.

Mr. Chernick next criticizes the allocation of all remaining load demand costs based upon a design day load. Exh. AG-7, p. 14; AG In. Br., pp. 57-58. Rather than being a legitimate target for criticism, this allocation is consistent with the Department's precedent for the assignment of capacity, namely on the basis of design day capacity. See NOI-Natural Gas Unbundling; D.T.E. 98-32-B, pp. 12, 35 (Capacity assignment is based "on the customer's contribution to peak-day demand for gas."); Exh. BG-25, pp. 7-8. If an alternative allocation methodology were chosen, then gas pricing would be inconsistent with capacity assignment. Mr. Chernick admitted the logic of tying gas pricing and capacity assignment together. Tr. 17, p. 1928. Given Department precedent on capacity assignment and Mr. Chernick's goal of consistency, it is surprising that he is critical of the Company's allocation of remaining load based upon the design day.

Finally, Mr. Chernick and the Attorney General return to concerns regarding complexity and argue that the adoption of the MBA would afford the Company too much discretion with respect to gas pricing without adequate control by the Department. AG In. Br., p. 58. Again, the MBA is now employed by several other utilities, the methodology has been subject to extensive consideration in this proceeding, and further calculations will be subject to Department review. Moreover, the MBA method has been administered effectively by other utilities and the

Department and has not had adverse effects with respect to customer migration. AG-RR-51; Tr. 15, pp. 1736-1737. Given this extensive experience with the MBA, the Company fails to see the need for any generic proceeding to review the MBA.

In sum, the Company has demonstrated that the MBA proposed in this proceeding is consistent with both established precedent and Department policy, will serve to reduce "cherry picking" and will help to establish more appropriate gas price signals. The Company has also demonstrated that the Attorney General's criticisms of the MBA allocator are misguided and not based in sound policy reasons. Accordingly, consistent with the Department's findings in Fitchburg Gas, D.T.E. 98-51, the Company respectfully requests that the Department accept the Company's proposed MBA allocator.

V. CONCLUSION

The Berkshire Gas Company respectfully submits that the Department should find that its PCM Plan, related calculation of revenue requirements and related rate design proposals are supported by the evidence presented in this proceeding, relevant Department precedent and sound principles of public policy. The Department should reject the arguments and adjustments proposed by other parties, except as noted herein. Accordingly, the Company respectfully requests that the Department make all findings of fact and rulings of law that are necessary and appropriate to determine that the PCM Plan and the proposed rate schedules are reasonable and appropriate and order the implementation of rate schedules for existing and new service that are consistent with the Company's proposals in this proceeding.

Respectfully submitted,

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